MATERIAL SAFETY DATA SHEET Essentially similar to OSHA Form #174

LIQUID CHLORINE BLEACH JR-654
SECTION 1

MANUFACTURER'S NAME: Sysco Chemical EMERGENCY PHONE NO.: STREET ADDRESS: 1390 Enclave Parkway (713) 584-1790

CITY, STATE, ZIP: Houston, TX 77077 DATE PREPARED: 8/2/88

SECTION 2 -- HAZARDOUS INGREDIENTS

* PEL * TLV * TLV * * PPM * PPM *MG/M3* CAS Number INGREDIENTS *****7681-52-9 Sodium Hypochlorite contains not more than 120% available chlorine with about

0.3 to 0.5% excess NaOH for stability control.

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 110 F for 15% NaOC1 SPECIFIC GRAVITY:50gPL-1.08

VAPOR PRESSURE (mm Hg.): V.P. of water MELTING POINT: na plus decomposition product variable-water vapor plus product decomposition.

VAPOR DENSITY (AIR = 1):

EVAPORATION RATE:

SOLUBILITY IN WATER: Complete

APPEARANCE AND ODOR: Light yellow green with pungent like chlorine

FLASH POINT (Method Used): Non flammable

FLAMMABLE LIMITS: na LEL: na UEL: na EXTINGUISHING MEDIA: Flood with water or carbon dioxide (CO2)

SPECIAL FIRE FIGHTING PROCEDURES: Avoid fumes from spilled or exposed liquid, dilute copiously, ventilate and be prepared to use respiratory protection if needed. Acid contamination will produce very irritating fumes similar to chlorine gas. Use NIOSH certified gas mask or use self contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Bleach decomposes when heated; decomposition products may cause containers to rupture or explode, vigorous reaction possible with organic materials or oxidizing agents, may result in fire.

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SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Neutralize with sodium sulfite, bisulfite or ferrous salt solution. Flush with water to dilute as much as possible, avoid heat and contamination with acid materials. Do not use combustible material such as sawdust to absorb hypochlorite.

WASTE DISPOSAL METHOD: Reduce with chemicals listed below, keep alkaline side and dilute with copious quantities of water. Main end product is salt water NaCL.

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING: Normal handling of household bottled bleach requires safety requirements as stated on the labels. Full protection should be provided when handling bulk shipments of concentrated industrial bleach solutions.

OTHER PRECAUTIONS: Store in vented, closed, clean non-corrosive containers in a cool dry location away from direct sunlight and not adjacent to chemicals which may react with the bleach if spillage occurs. If shipped you must comply with dot etc. shipping regulations. If closed containers become heated, they should be ventilated to release decomposition products (mainly oxygen under normal decomposition) Do not mix or contaminate with ammonia, hydrocarbons acid alcohol sand ethers.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION (specify type): When fumes are present use NIOSH approved respirator with acid type canister.

VENTILATION: No special

LOCAL EXHAUST:

MECHANICAL:

SPECIAL: Ventilation required unless bleach is exposed to

decomposition condition.

OTHER: I.E. spills or acid conditions.

PROTECTIVE GLOVES: Rubber gloves or plastic gloves when exposed to solutions stronger than household bleach (7%)

EYE PROTECTION: Use goggles when dispensing solutions stronger than household bleach (7%)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Use rubber apron, etc. to protect body from any splashing conditions. Use rubber protective shoes if spill occurs. Safety showers and eye wash stations should be available.

WORK/HYGIENIC PRACTICES: none on in the first that the first that the second consideration the first the second consideration that the second IDENTITY: LIQUID CHLORINE BLEACH JR-654

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SECTION 9 - SPECIAL PRECAUTIONS

The above information is believed to be correct with respect to the ingredients contained herein falling within the definition of hazardous chemicals in accordance with the Occupational Safety and Health Administration's Hazard Standard Communications Act. Data, standards and regulations change, and since conditions of use and handling are beyond our control, no warranty, express or implied, is made as to the completeness or upcoming accuracy of this information.

Pursuant to Proposition 65: Certain raw materials used in making this product may contain small amounts of materials as impurities which are regulated by Proposition 65, in the state of California.